

ABSTRACT

UTILIZING ISO 27001:2022 IN INFORMATION SECURITY DESIGN FOR BPRCCo SME DIGITAL TRANSFORMATION

By

Fandi Ahmad Atqan Setyoso

1202204103

In the era of industrial revolution 4.0, organizations such as BPRCCo need to undertake Digital Transformation (DT) to remain competitive. However, a major challenge in this process is information security, which is often the cause of DT failure. Previous research highlights the importance of ambidextrous governance and management (traditional and agile approaches) for large banks in achieving DT, especially in information security. However, this approach has not been proven for small-scale banks such as BPRs. Therefore, this study aims to develop a recommended information security management system (ISMS) solution that is relevant for MSMEs and estimate its capability improvement to support DT. The research method involves Design Science Research (DSR), including problem identification, requirement specification, design and development, demonstration, and evaluation. Data was collected through interviews and data analysis, then analyzed using the ISMS framework based on the ISO 27001:2022 standard. Based on the results of risk analysis and mapping to previous research, it was found that AB controls in the PDCA cycle and Annex were prioritized by BPRCCo. Next, a number of solutions were designed based on ISMS practices. These recommendations are organized as an implementation roadmap that can help BPRCCo prepare and fully implement the ISMS in critical areas to support DT. This research contributes to the understanding of ISMS for small-scale banks, particularly as a case study of SME, and for similar organizations.

Keywords — Digital Transformation, Design Science Research, Information Security, ISO 27001:2022, BPRCCo.